

REMARKS

Claims 1-3, 5, 6, and 9-23 remain pending in this application.

Claims 1-3, 5, 6, and 9-23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishimura et al. (EP 0304503) in view of Yamada et al.

(JP 2001156114 - reference is made herein to the content of the English language equivalent: U.S. Patent No. 6,512,184). As recognized by the Office, Ishimura et al. teaches a hardener for a curable one-package resin system that comprises the hardener and an epoxy resin (B) in a ratio of 10-50,000 parts by weight epoxy resin to 100 parts by weight of the hardener (pg. 3, lines 10-25).

The Office also recognizes that Ishimura et al. teaches that the hardener consists of a powder core of an amine compound (A) having at least one tertiary amino group in the molecule, the powder having groups capable of absorbing infrared rays of the recited wavelengths and a capsule membrane formed as a reaction product of the amine compound and an epoxy resin. The Office recognizes that Ishimura et al. does not disclose, inherently or otherwise, the total amount of chlorines in the epoxy resin, and does not teach or otherwise suggest that the amount is not more than 400 ppm as recited in claim 1. The importance of observing this limitation for chlorines in the epoxy resin used in the capsule membrane is described at page 30, lines 15-19, of the specification.

Yamada et al. is concerned with connecting two elements by means of a connecting material containing an adhesive component constituted mainly of a thermosetting resin (Abstract; col. 2, lines 46-56). Epoxy resins are described as the most preferable thermosetting resin to be incorporated in the connecting material (col. 4, lines 16-50). Yamada et al. also describes the possibility of using a latent hardening

agent, such as an imidazole or an amine, encapsulated in microcapsules. Other than this broad suggestion, however, Yamada et al. does not contain any description of the constituent parts or materials that could be used in such a microcapsule.

The Office relies on the disclosure of Yamada et al. at col. 5, lines 39-45, that teaches that there is no limitation in the contaminant ion content of the connecting material, but it is preferable that the contaminant ion content is 100 ppm or less, as the content before hardening. However, this teaching relates to the content of the thermosetting resin that is used in the connecting material, not the total amount of chlorines in the epoxy resin used for the formation of the capsule membrane as in the claimed invention. In fact, Yamada et al. does not make any suggestion regarding a suitable material for a microcapsule.

Upon careful review of the teachings of Yamada et al., it will be understood that the preferences expressed for the thermosetting resin of the connecting material correspond to the epoxy resin composition of the present invention and to the epoxy resin (B) of Ishimura et al., not the epoxy resin (D) of the capsule membrane of the claimed invention. Accordingly, a person skilled in the art would not find in Yamada et al. any useful information regarding the selection of an epoxy resin for the capsule membrane material.

In addition, Yamada et al. is concerned that the presence of contaminant ions may cause defective electroconductivity when the connecting material shows a hygroscopic behavior (col. 2, lines 9-44). This defective electroconductivity can be avoided by reducing the impurities contained in the connecting material. Yamada et al. is not concerned with providing a compact shell without a crosslink defect or achieving

compatibility of the hardening property and storage stability by limiting the total amount of chlorine in the epoxy resin used for the formation of the capsule membrane. Indeed, these results could not have been predicted from the teachings of Ishimura et al. and/or Yamada et al., whether considered alone or in combination. Accordingly, since the prior art fails to establish a prima facie case of obviousness, this rejection should be withdrawn.

Prompt and favorable reconsideration of this application is respectfully requested.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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By: Charles E Van Horn
Charles E. Van Horn
Reg. No. 40,266
(202) 408-4000